

ABSTRACT

A method and apparatus for monitoring the exhaust path of a gas turbine engine for the presence of unwanted flames downstream from the main combustion chamber(s). The system is comprised of an Electro-Optics Module containing sensors and associated processing electronics as well as collection and transmitting optics, which relay the radiant energy generated by a flame event to the sensors. The information generated by the sensors is directly related to the time based intensity of the flame event, which can suggest problems associated with the condition of combustion related engine components. This information can then be used by the engine owner/operator to assess the condition of the engine and determine the more efficient required maintenance schedule.